

What is claimed is:

1. A method of powering a vehicle information, communication, or entertainment system in a vehicle, said vehicle having a vehicle powered state and a vehicle unpowered state, said method comprising the steps of:

(a) monitoring a state of a main application processor with a management processor;

(b) detecting a change from a suspend-to-RAM state to a Run state without a request from the management processor;

(c) requesting a transition to a suspend-to-disk state if the main application processor is in a state other than the suspend-to-disk state after a first time period after (b).

2. The method of Claim 1 further comprising:

(d) the main application processor returning to the suspend-to-RAM state after (b) and before (c).

3. The method of Claim 1 further comprising:

(d) the main application processor continuing in the Run state until (c).

4. The method of Claim 1 further comprising:

(d) operating the management processor in a sleep mode; and

(e) periodically activating the management processor from the sleep state;

wherein (a), (b), and (c) occur in response to (e).

5. The method of Claim 1 further comprising:

(d) turning off a voltage to the main application processor if the main application processor fails to assume the suspend-to-disk state in response to (c).

6. The method of Claim 1 further comprising:

(d) scheduling a suspend-to-disk state of the main application processor pursuant to software of the main application processor; and

(e) the main application processor changing from
5 the suspend-to-RAM state to the Run state in response to (d).

7. A method of powering a vehicle information, communication, or entertainment system in a vehicle, said
10 vehicle having a vehicle powered state and a vehicle unpowered state, said method comprising the steps of:

(a) attempting a change from a suspend state to a Run state of a main application processor;

(b) monitoring for a status message from the main
15 application processor with a management processor; and

(c) correcting a fault if the status message is absent a time period that is a function of the suspend state.

20 8. The method of Claim 7 wherein (a) comprises attempting a change from a suspend-to-RAM state.

25 9. The method of Claim 8 wherein (c) comprises correcting if the status message is absent about five seconds.

10. The method of Claim 7 wherein (a) comprises attempting a change from a suspend-to-Disk state.

30 11. The method of Claim 7 wherein (c) comprises correcting if the status message is absent about sixty seconds.

35 12. The method of Claim 7 wherein (c) comprises generating a reset signal.

13. The method of Claim 7 wherein (c) comprises correcting if the status message is absent a lesser time

period for a change from a suspend-to-RAM state than for a change from a suspend-to-Disk state.

14. The method of Claim 12 further comprising:

5 (d) cycling regulated voltages off and then back on to said main application microprocessor if said status message is not received during a further predetermined time period; and

(e) ceasing (a) if the main application processor
10 fails to change states in response to (d).

15 15. A method of powering a vehicle information, communication, or entertainment system in a vehicle, said vehicle having a vehicle powered state and a vehicle unpowered state, said method comprising the steps of:

(a) attempting a change from a suspend state to a Run state of a main application processor;

(b) monitoring for a status message from the main application processor with a management processor;

20 (c) generating a reset signal if the status message is absent a first time period; and

(d) ceasing (a) if the main application processor fails to change states.

25 16. The method of Claim 15 further comprising:

(e) repeating (c) at least twice;

wherein (d) comprises ceasing (a) if the main application processor fails to change states in response to (e).

30 17. The method of Claim 15 further comprising:

(e) cycling regulated voltages off and then back on to said main application processor if said status message is not received during a further predetermined time
35 period; and

wherein (d) comprises ceasing (a) if the main application processor fails to change states in response to (e).

18. The method of Claim 17 further comprising:

(f) repeating (e);

wherein (d) comprises ceasing (a) if the main application processor fails to change states in response to (f).

19. The method of Claim 15 further comprising:

(e) turning off LCD backlighting in response to (d).

20. The method of Claim 15 further comprising:

(e) repeating (a), (b), (c) and (d) in response to a change from a vehicle unpowered state to a vehicle powered state.

21. The method of Claim 15 wherein (c) comprises generating the reset signal wherein the first time period is selected a function of the suspend state.

22. A method of powering a vehicle information, communication, or entertainment system in a vehicle, said vehicle having a vehicle powered state and a vehicle unpowered state, said method comprising the steps of:

(a) determining a state of a main application processor in response to a wakeup signal;

(b) if the state comprises a suspend state, attempting a change from the suspend state to a Run state; and

(c) if the state comprises a Run state, monitoring for a change to the suspend state for a first time period.

23. The method of Claim 22 further comprising:

(d) changing the main application processor from the suspend state to the Run state if the main application processor changes to the suspend state in the first time period.

24. The method of Claim 22 further comprising:

(d) monitoring for a status message from the main application processor with a management processor; and

(e) correcting a fault if the status message is absent a second time period.

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25. A method of powering a vehicle information, communication, or entertainment system in a vehicle, said vehicle having a vehicle powered state and a vehicle unpowered state, said method comprising the steps of:

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(a) attempting a change from a suspend state to a Run state of a main application processor;

(b) monitoring for a state of the main application processor with a management processor;

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(c) repeating (a) if the state is unchanged after a first time period; and

(d) ceasing (a) if the main application processor fails to change states in response to (c).

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26. The method of Claim 25 wherein (a) comprises generating a reset signal.

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27. The method of Claim 25 wherein (a) comprises cycling regulated voltages off and then back on to said main application processor.

28. The method of Claim 25 wherein (c) comprises repeating (a) at least twice.

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29. The method of Claim 26 further comprising:

(e) cycling regulated voltages off and then back on to said main application processor at least twice after (a) and (c);

wherein (d) comprises ceasing in response to (a) and (e).

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30. A method of powering a vehicle information, communication, or entertainment system in a vehicle, said vehicle having a vehicle powered state and a vehicle unpowered state, said method comprising the steps of:

(a) attempting to place a main application processor in a suspend state; and

(b) removing voltage to the main application processor without a reset attempt if (a) fails.

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31. The method of Claim 30 wherein (a) comprises instructing the main application processor to enter a suspend-to-RAM state with a management processor.